



U.S. Department
of Transportation
**Federal Highway
Administration**

Utah Division

February 28, 2008

2520 West 4700 South, Ste. 9A
Salt Lake City, UT 84118-1880

In Reply Refer To:
HDA-UT

Ms. Rebecka Stromness, P.E.
Utah Department of Transportation
Environmental Program Manager
4501 South 2700 West
Salt Lake City, UT 84119-5998

Subject: Project No. STP-0079(2)0 SR-79
Hinckley Drive Extension
Environmental Assessment – Reevaluation

Dear Ms. Stromness:

We have reviewed the subject environmental assessment reevaluation and hereby approve release of the reevaluation for the 30 day public comment period in accordance with 23 CFR 771.111 and 23 CFR 771.119.

Sincerely,

Douglas S. Atkin
Area Engineer

cc: Majorie Rasmussen, UDOT – Region 1
Paul Egbert, UDOT – Region 1
Chris Lizotte, UDOT – Region 1

DSATKIN:ds

**MOVING THE
AMERICAN
ECONOMY**

Environmental Evaluation of Final Design Modifications

STP-0079(2)0; SR-79 Hinckley Drive Extension

**Federal Highway Administration (FHWA) Utah Division
Utah Department of Transportation (UDOT) Project**

27 February 2008

Introduction/History

This Reevaluation was prepared in accordance with Federal Highway Administration (FHWA) regulations (23 CFR part 771.129(c)), FHWA Technical Advisory TA 6640.8A, and the National Environment Policy Act regulations (40 CFR 1500, et seq.). The purpose of the evaluation is to determine whether or not there have been changes in the project or its surroundings or new information which would require further environmental impact analysis. The Environmental Assessment (EA) for Project # STP-0079(2)0, SR-79; Hinckley Drive Extension to SR-108, Ogden was completed in October 2002. In February 2007 design began for the construction of the project. At that time the EA document and project was reviewed to verify that it met current UDOT design criteria. The Purpose and Need in the EA is considered current and valid. The Reevaluation still meets the Purpose & Need. The Reevaluation has improved safety, used current design standards, and corrected design deficiencies that were in the original EA. The Reevaluation Alternative will extend Hinckley Drive from its terminus at SR-126 (1900 West) to Midland Drive at 3600 South, there creating a four-legged signalized intersection (See Figures 1, 2, and 3). This document will discuss changes that have occurred over time in design standards and project issues as they relate to the EA Alternative and the Reevaluation Alternative, and it will reevaluate the changes in environmental impacts associated with the Reevaluation Alternative.

Purpose and Need

The EA purpose and need for the proposed action include:

- Improve regional traffic circulation and access between western Weber County and the Ogden metropolitan area
- Accommodate expected residential and commercial growth
- Conform to state, regional, and local master plans
- Preserve corridor

Independent Utility

The proposed project will have independent utility as an arterial connecting two state routes as well as independent significance, as it would provide a grade separated crossing of the rail lines. The proposed project will extend SR-79 (Hinckley Drive) from SR-126 (1900 West) to SR-108 (Midland Dr.). No additional transportation improvements in the area are necessary for the proposed project to function as intended. The proposed Hinckley Drive improvements would not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Design Criteria

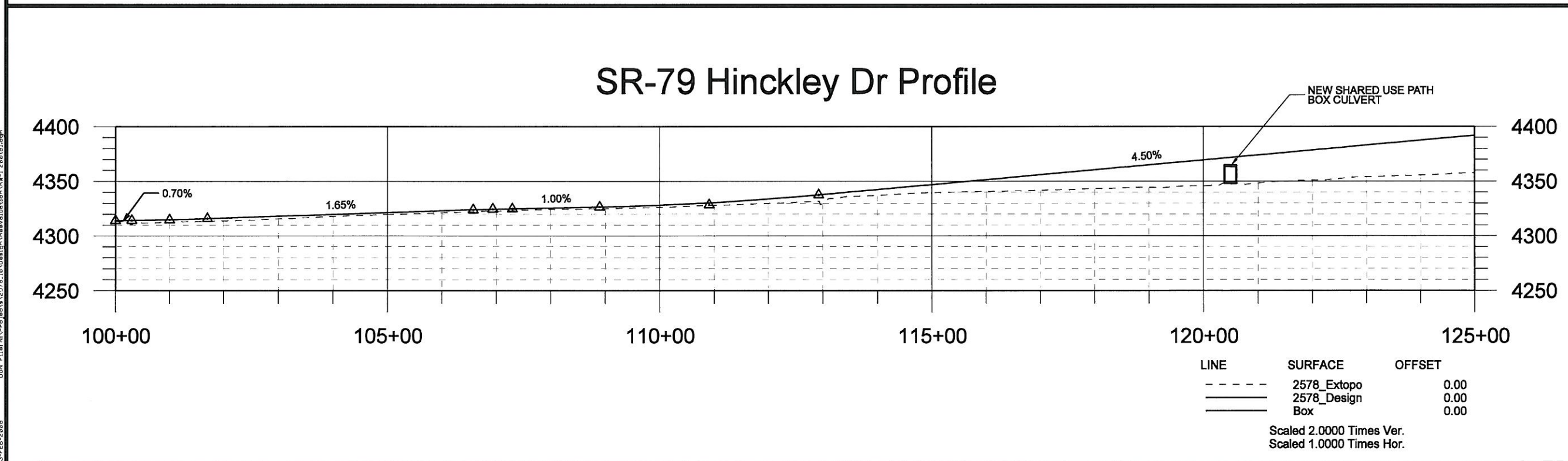
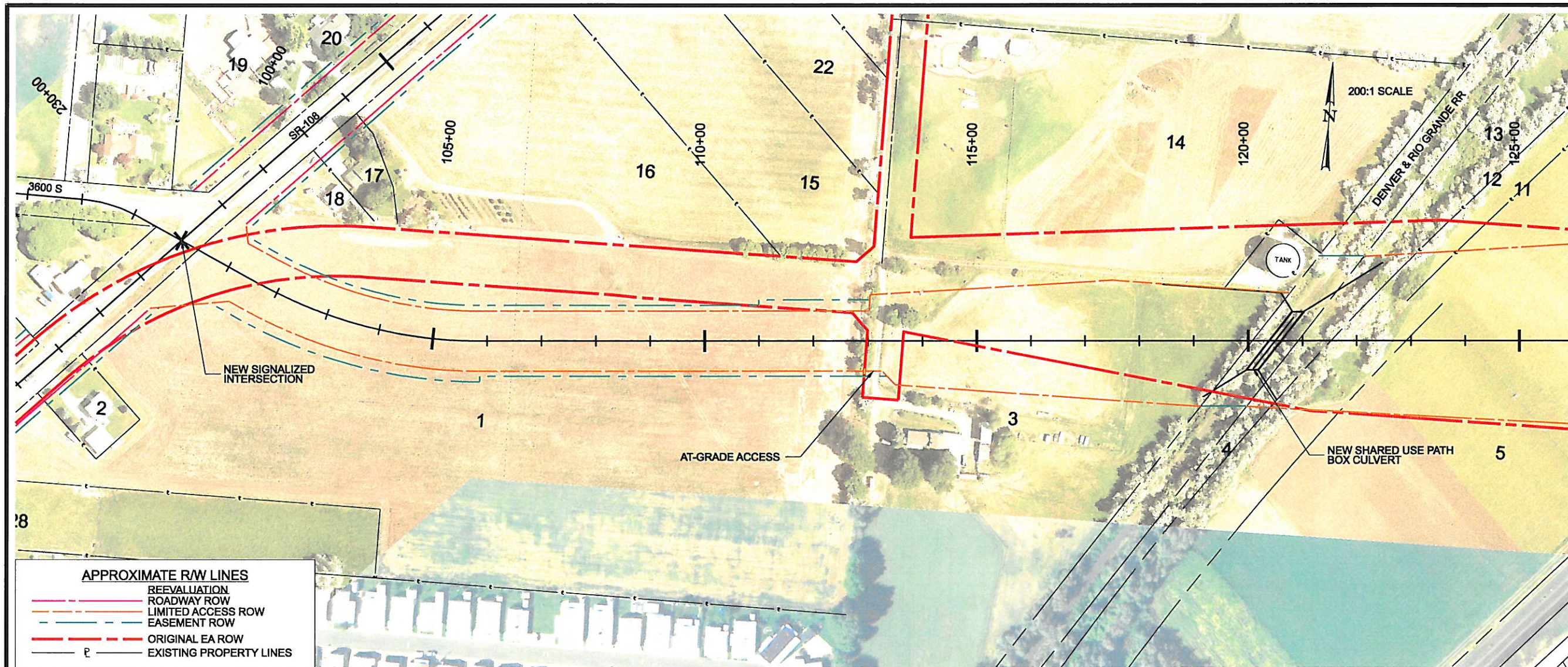
As engineering work began, many design elements of the original EA were identified that needed to be brought up to current standards or modified. The following elements needed to be addressed and led to the reevaluation of the EA: design speed, horizontal clearance (clear zone), barrier curb, grade entering a (future) signalized intersection, curve radius, dropping lanes in a curve, network connectivity, utilities (water tank), roadway right of way width, easements, and intersection crossing angle at SR-126. As can be expected, many of the above elements are interrelated and consequently are addressed in connection with others.

Design Speed

The existing Hinckley Drive functional classification is a Principal Arterial with a speed limit of 55 mph, while Midland Drive is a Minor Arterial with an existing speed limit of 50 mph. The WFRC Long Range Plan shows this project as an extension of Hinckley Drive with a functional classification of this extension as either a Minor or Principal Arterial. The EA design speed was set at 45 mph and was inconsistent with the geometry, road characteristics, and posted speed of the adjoining roadways.

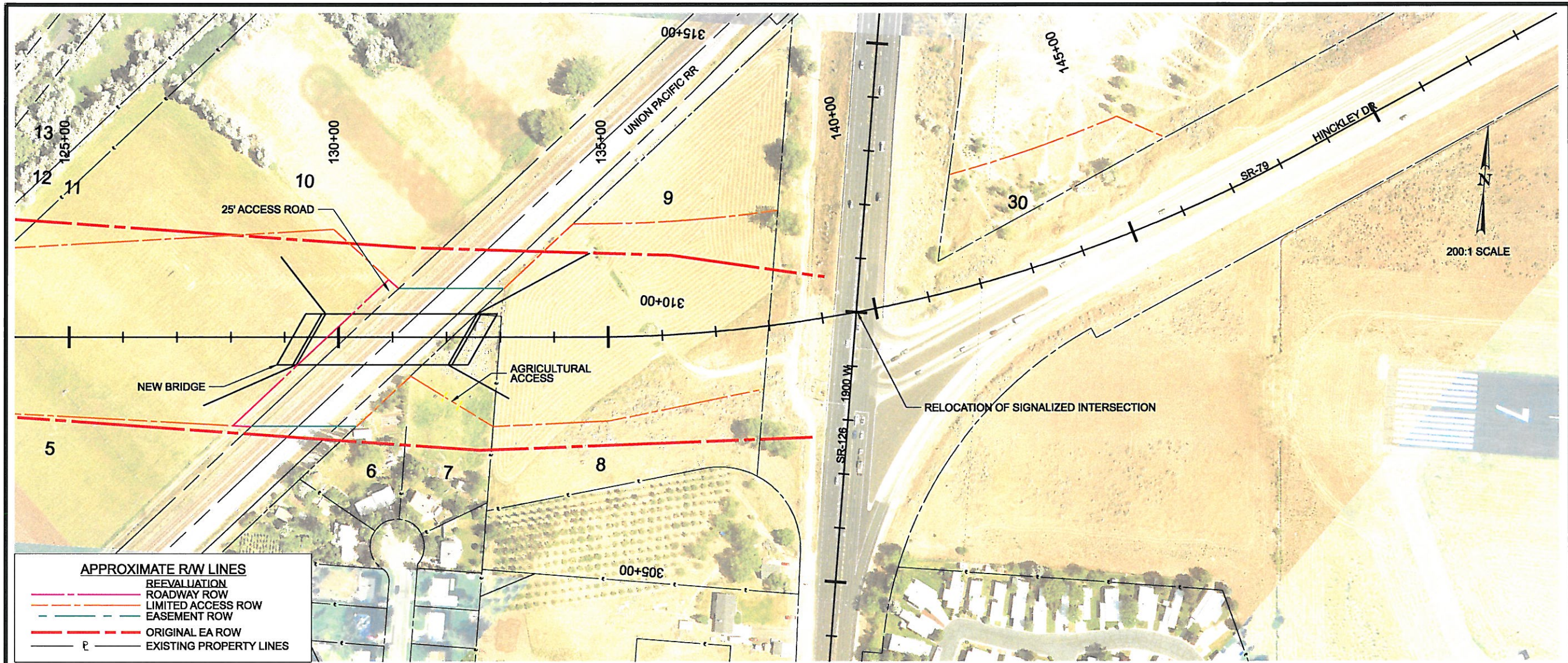
In addition, a 45 mph design speed was chosen to minimize clear zone requirements and impacts through the use of barrier curb. At the time of the EA, the use of barrier curb with a 45 mph speed limit would reduce the effective clear zone and the overall project footprint. This reduction in footprint size reduces both project impacts and cost.

In current standards, 'barrier' curb no longer reduces the required distance for clear zone. The design speed for the Reevaluation is 50 mph. Speed limits are set based on existing traffic and a 50 mph design speed is more appropriate for the expected traffic flow. The Reevaluation design speed is more consistent with the current WFRC classification; it is also more consistent with the geometry, road characteristics, and posted speed of the adjoining roadways, SR-79 (Hinckley Dr.) and SR-108 (Midland Dr.).

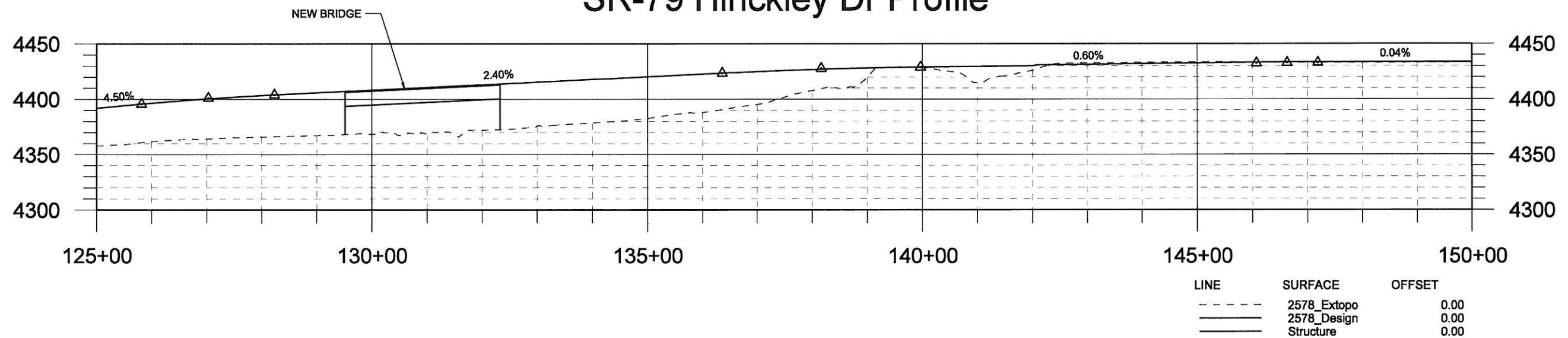


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PROJECT HINCKLEY DRIVE TO SR-108 CONST. NEW ROAD, RR OVERPASS	PROJECT NUMBER STP-0079(2)0	APPROVED PROFESSIONAL ENGINEER _____		REEVALUATION FIGURE 1
SHEET NO. _____				

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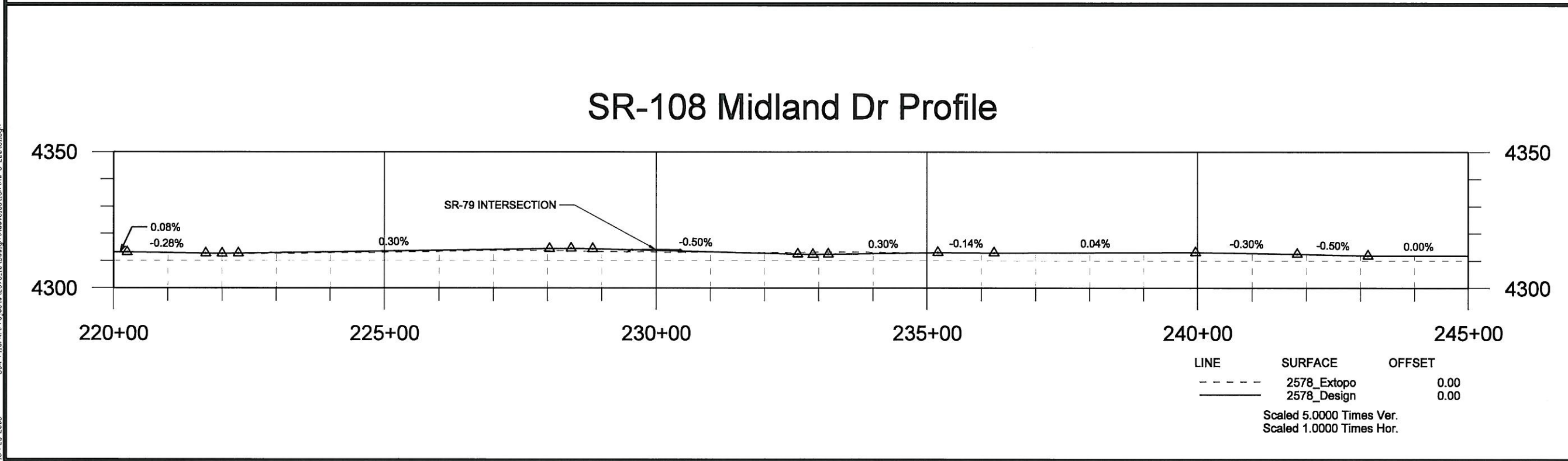
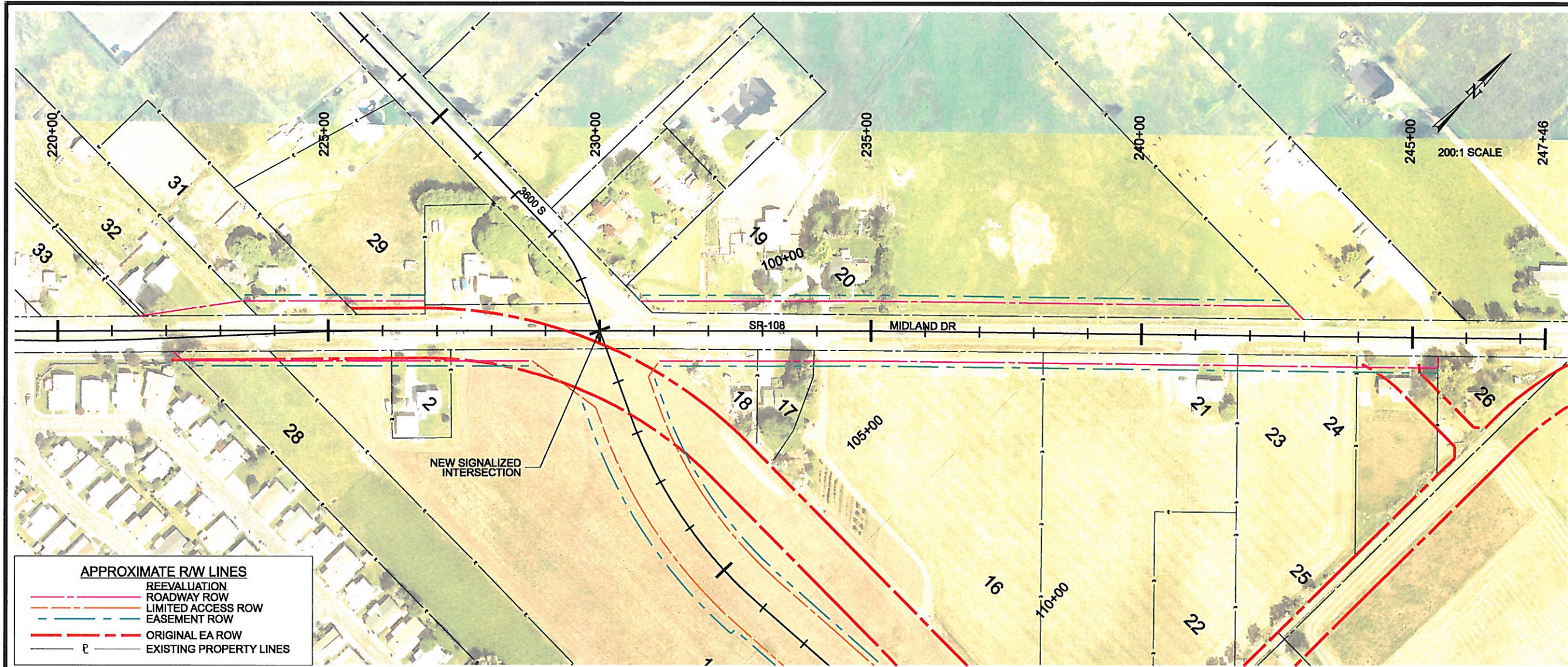


SR-79 Hinckley Dr Profile



Scaled 2.0000 Times Ver.
Scaled 1.0000 Times Hor.

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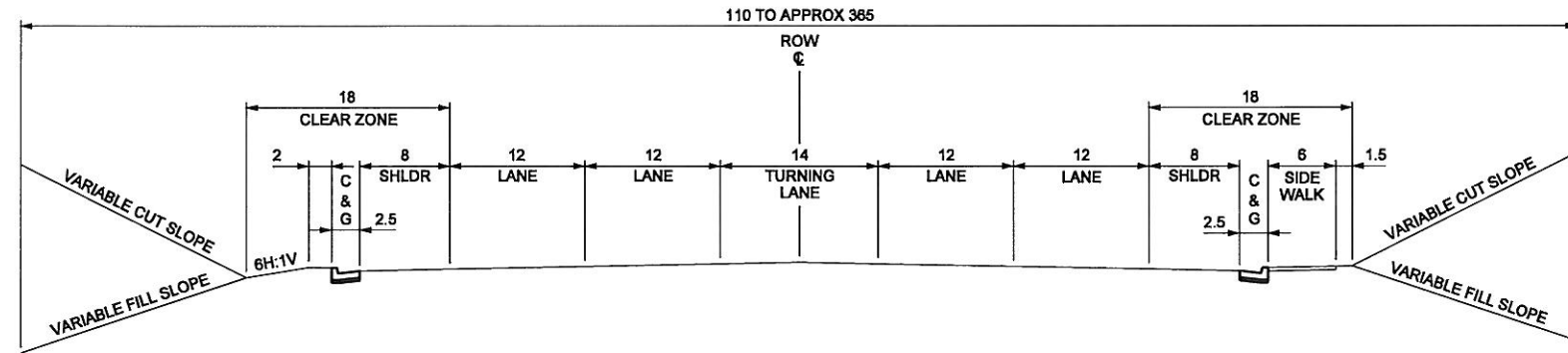
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HINCKLEY DRIVE TO SR-108 CONST. NEW ROAD, RR OVERPASS		PROJECT NUMBER STP-0079(2)0 REEVALUATION FIGURE 3	
PROJECT SHEET NO. _____		REVISIONS	

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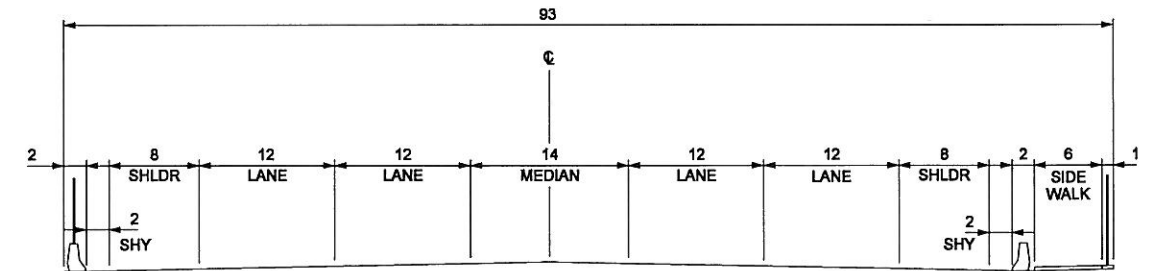
HINCKLEY DRIVE (SR-79)

PROPOSED TYPICAL SECTION
DESIGN SPEED 50 mph



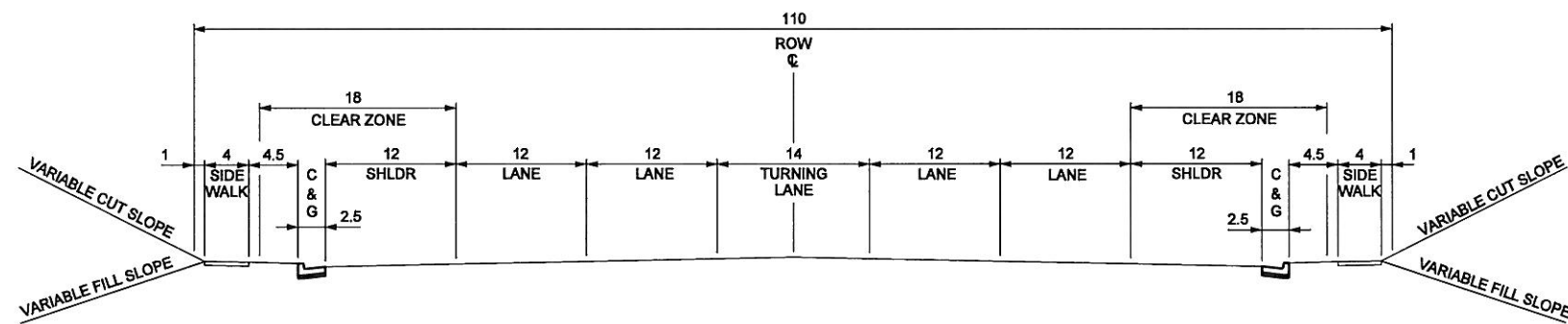
HINCKLEY DRIVE (SR-79)

PROPOSED STRUCTURE TYPICAL SECTION
DESIGN SPEED 50 mph



MIDLAND DRIVE (SR-108)

PROPOSED TYPICAL SECTION
DESIGN SPEED 50 mph



3600 SOUTH

PROPOSED TYPICAL SECTION
DESIGN SPEED 35 mph

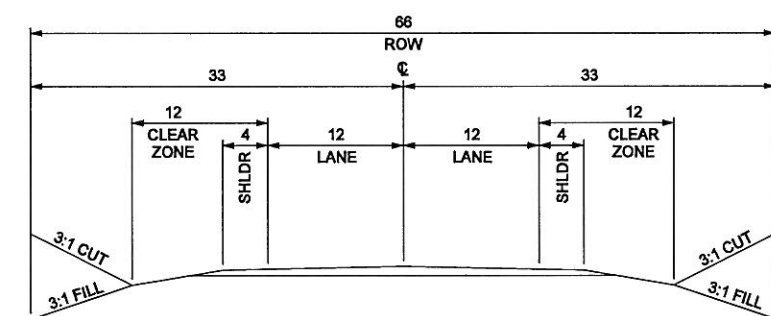


FIGURE 4
PROPOSED TYPICAL SECTIONS
(REEVALUATION)

Horizontal Clearance (Clear Zone)

The EA horizontal clearance (also known as clear zone) is 18 feet based on a design speed of 45-50 mph and AADT of greater than 6000. Although the design speed is increased, the clear zone remains the same. However, because barrier curb no longer is considered as 'barrier' for clear zone at any speed, the typical section of the EA Alternative was short of current standards by 5.5 feet on the left and 0.5 feet on the right. The Reevaluation Alternative meets clear zone standards. (See Figure 4 for Typical Sections)

Barrier Curb

The EA used curb and gutter as a roadside safety barrier to save on the horizontal clearance. The reevaluation provides full clearance. AASHTO does not recognize curb and gutter as a safety barrier. (See Design Speed and Horizontal Clearance)

Grade at Intersection

The EA profile had the grade entering the intersection at the bottom of the hill of 6%. In any alternative, the grade will be reduced to about 4.5%, yet AASHTO recommends less than 3% grade entering an intersection (pg. 582, green book). The intersection in the EA would have been constructed as a 2-way stop controlled intersection, but would soon require signalization or it would fail. Stopping traffic at a signal at the end of a long, steep grade introduces additional safety concerns. The reevaluation shifts the signal to an existing tee intersection with SR-108 and 3600 South, creating a new 4 legged intersection. Constructing the intersection at this location maintains traffic flow into Ogden and provides a safe intersection at a more desirable location for current traffic operation and design standards. The updated traffic study shows the Reevaluation Alternative (signalized) as the best for the overall network. (See attached study and network connectivity paragraph below).

Curve Radius

Horizontal curve radius is based on design speed and superelevation. The radius running through the intersection of Hinckley Dr. and SR-126 (1900 West) was below standard in the EA. Even with a design speed of 45 mph, the radius was not large enough because the superelevation was constrained by the grade of SR-126. The Reevaluation meets the standard for horizontal curve radius by lengthening the radius, and shifting alignment of the intersection to the north about 150 feet. The impacts to right of way are identified in Table 1.

Utilities (Water Tank)

The EA alignment would require relocation of tank. (The alignment is too close to make it cost effective to avoid the tank with a wall where mitigating settlement would also be an issue.) Relocating the water tank is estimated at over \$1.5 million dollars, a cost neither accounted for in the estimate of the project nor in the alternatives selection. The Reevaluation alignment angles away from the tank and avoids it with a small retaining wall, estimated at approximately \$50,000.

Dropping Lanes in a Curve

The EA dropped lanes in a curve. This was done to minimize the impacts to existing SR-108 and to shorten the project length. The reevaluation eliminates an unsafe curve drop in a curve (Roadway Design MOI page 166). It also provides full length of tapers and traffic lane configurations for the intersection design for the design year 2030.

Network Connectivity

The EA severed the direct connection of SR-108 (Midland Dr) north to SR-126 and created a free flow condition at Midland to SR-79 (Hinckley). Although this free flow connection of traffic for that isolated location is efficient, the traffic report showed that the reevaluation alternative served regional traffic better. The traffic report shows both alternatives would include a signalized intersection, either at SR-108 (Midland Dr.) or the new access road. Its best location for traffic flow and for safety reasons (see Grade at Intersection paragraph) is at the current t-intersection with 3600 S. The reevaluation conforms to the regional plan of improving regional traffic circulation and access between western Weber County and the Ogden metropolitan area. It also conforms to state, regional, and local master plans.

The traffic study performed for the re-evaluation shows that the intersection at SR-108 (Midland Dr.) and SR-126 (1900 West) will be at a level of service F at the design year 2030. The intersection fails due to increased traffic volumes on SR-126 independent of this project or any of the alternatives analyzed (No-Build, EA or Re-evaluation Alignment). Improvements to the LOS along SR-126 will need to be addressed through an independent future action. The actions taken on this project do not preclude any foreseeable future actions that may be taken to improve that intersection.

Property Impacts Comparison

Table 1. Property Impacts – Comparison of Hinckley Drive EA and Reevaluation

Parcel	Owner	Total Area	EA ¹ Take		Reevaluation Take		Increased Take	
		Acres	Acres	%	Acres	%	Acres	%
1	RF Rawson Co., Inc	19.12	3.24	17%	4.31	23%	1.07	33%
2	David R Rawson & Wf Amy D	0.40	0.04	9%	0.07	18%	0.04	97%
3	Dorothy D Brown Trustee	10.09	2.72	27%	3.49	35%	0.78	29%
4	Heino Kap & Wf Mary	1.46	1.46	100%	1.46	100%	0.00	0%
5	P Wayne Hansen & Gwen C Hansen TR	19.40	3.26	17%	3.14	16%	-0.12	-4%
6	Elden G Welchman & Wf Kathy L	0.66	0.17	27%	0.00	0%	-0.17	-100%
7	Harold James Lanier & Wf Pamel Harrison	1.25	0.76	61%	0.44	35%	-0.32	-42%
8	Kevin Wayne Hansen ETAL	3.49	2.62	75%	1.96	56%	-0.67	-25%
9	Kevin Wayne Hansen ETAL	3.55	1.32	37%	1.97	55%	0.65	49%
10	P Wayne Hansen & Gwen Call Hansen TR	18.68	2.40	13%	2.16	12%	-0.24	-10%
11	P Wayne Hansen & Gwen C Hansen TR	2.07	0.24	11%	0.16	8%	-0.08	-32%
12	Caroline Kap (Barbara Swapp - Claims)	2.07	0.23	11%	0.14	7%	-0.09	-39%
13	Heino Kap & Wf Mary	6.93	0.29	4%	0.15	2%	-0.14	-49%
14	E L B Properties LC	8.95	1.78	20%	0.00	0%	-1.78	†
15	Don N Stokes & Wf Linda	3.73	0.01	0%	0.14	4%	0.13	1205%
16	Don N Stokes	4.94	0.00	0%	0.28	6%	0.28	*
17	Claradon V	0.36	0.00	0%	0.07	20%	0.07	*
18	Scott D Jones ETAL	0.33	0.00	0%	0.11	33%	0.11	*
19	Don N Stokes	12.14	0.00	0%	0.82	7%	0.82	*
20	Don N Stokes	1.00	0.00	0%	0.12	12%	0.12	*
21	Don N Stokes & Wf Linda D	0.50	0.00	0%	0.10	21%	0.10	*
22	Don N Stokes	1.28	0.00	0%	0.00	0%	0.00	†
23	Joyce Lavon Stokes & Husb Lamar Ross	1.00	0.00	0%	0.10	10%	0.10	*
24	Joyce Lavon Stokes & Husb Lamar Ross	0.47	0.00	0%	0.05	11%	0.05	*
25	Joyce Lavon Stokes & Husb Lamar Ross	0.95	0.01	1%	0.00	0%	-0.01	†
26	Leroy J Reardon	0.57	0.57	100%	0.00	0%	-0.57	†
27	EHK Investment Co., LTD	27.83	0.98	4%	0.00	0%	-0.98	†
28	Richard Miller & Joanne Miller TR	2.50	0.06	2%	0.11	4%	0.05	79%
29	The Rawson Family Partnership	2.20	0.03	2%	0.12	5%	0.08	236%
30	Brent T Warren & Scott T Warren	19.37	0.00	0%	0.95	5%	0.95	▣
31	Debra K Wilde	1.50	0.00	0%	0.16	10%	0.16	*
32	Richard H Miller & Joanne N Miller TR	2.94	0.00	0%	0.07	2%	0.07	*
33	Howard L Anderson	1.01	0.00	0%	0.00	0%	0.00	*
		Totals	22.20		22.65		0.45	2%

* Newly affected parcel (On SR-108)
▣ Newly affected parcel (On Hinckley)
† Formerly affected parcel

¹ The original EA represents only 92' ROW width and no easements (slope, utility, etc.), while the Reevaluation includes sufficient ROW to meet current standards and includes easements.

Easements

As the design was furthered along, the impacts for easements increased. The reevaluation accounts for all easements necessary for the project; slope, utility, construction, etc. These impacts would be required for any alignment selection. (See Table 1)

Right of Way

The EA right of way along SR-79 (Hinckley Dr.) was 84 to 92 feet. The reevaluation establishes a minimum right of way of 110 feet for both SR-79 (Hinckley Dr.) and SR-108 (Midland Dr.). This allows for a 14 foot median, turn lanes, sidewalks, and full clear zone within right of way. These impacts would be required for any alignment selection. (See Table 1) The difference in ROW are; no impacts are needed on new alignments (access roads), additional right of way needed to accommodate the 14 foot median (see Median Width below), and additional right of way is being purchased along SR-108 to accommodate the intersection improvements. As seen in Table 1 even with the additional work along SR-108 and also adding in the additional impacts of the easements, the overall impacts are a 2% increase in total acreage. Several acres of easements are included that were not included with the EA impacts.

Intersection Crossing Angle at SR-126

The EA alignment shows an intersection crossing angle of SR-126 (1900 West) and SR-79 (Hinckley Dr.) of 75°. AASHTO recommends 90°. The reevaluation increased the angle to 79°. This is an additional benefit for the reevaluation.

Median Width

The EA defines the median width varying between 6 feet and 14 feet. This would allow for less width on the structure and minimize ROW impacts. The reevaluation meets current UDOT standards and keeps a consistent width of 14 feet (Roadway Design MOI page 108). With the proposed design speed, transitioning between different widths would require long tapers and lane shifts, which are not practical as the full width is necessary for all intersections and access points to improve safety and provide the design capacity of the roadway.

Additional EA Updates

To accommodate current trail plans, a box culvert will cross over the old Denver & Rio Grande Western Railroad (D&RGW) tracks. This will replace the structure in the EA document. This will be done by an agreement with the owners of the track. This allows the profile grade to drop from 6% to 4.5%.

As referenced in the EA document, access to and use of existing parcels and railroads severed by the Hinckley Drive extension will be maintained in accordance with UDOT Policy. This includes the Hansen Farm and Parcel #3 (Brown Property).

SR-108 (Midland Dr) is widened to accommodate the full traffic at the signalized intersection for the design year 2030.

Scope of This Environmental Evaluation

This environmental evaluation analyzes the impacts of the proposed design modifications on the human and natural environments. Environmental impacts that have changed in this reevaluation include: property impacts. The Hinckley Drive Extension project purpose and need and concept remain unchanged. The footprint of the proposed alignment modifications have changed from the original EA.

Despite the change in footprint, the environmental impacts to farmlands, social environment, economic development, pedestrian and bicyclist facilities, hazardous materials, wildlife, threatened or endangered species, floodplains, noise impacts, construction impacts, visual impacts, or indirect and cumulative impacts remain the same. Wetlands, water quality, and most property impacts will be lessened by the proposed modifications. See Table 3 Project Impacts and Mitigation.

Traffic Analysis

Design considerations concerning safety, grade of alignment and traffic flow prompted UDOT to perform additional traffic analysis for the Hinckley Drive Environmental Assessment (EA) Preferred Alternative alignment at the Hinckley Drive / Midland Drive intersection. The analysis focused on the traffic characteristics of the Reevaluation alignment and examined the traffic arguments for and against the proposed changes. An element of the purpose and need for the Hinckley Drive extension is to improve regional traffic circulation and access in and around the Ogden area. Traffic analyses were performed to confirm that the proposed design modifications meet or exceed the transportation needs for the area, and evaluate any potential effects the proposed modifications would have on the surrounding area. The EA proposed an intersection just east of Midland Drive. The modified design examined in this reevaluation would create that intersection at Hinckley Drive / Midland Drive / and 3600 South intersection. The attached traffic report examines the effects that connection would have at several locations. The study includes operational analysis at 5 intersections, listed below:

- SR-126 (1900 West) / SR-108 (Midland Drive)
- SR-126 (1900 West) / SR-79 (Hinckley Drive)
- SR-37 (4000 South) / SR-126 (1900 West)
- SR-108 (Midland Drive) / 3600 South (on future Hinckley Drive alignment)
- SR-37 (4000 South) / SR-108 (Midland Drive)

This analysis examines three alternatives based upon new volume projections:

- 2030 No Build
- 2030 Original EA preferred alternative (Midland / Hinckley Divided Intersection)

- 2030 Reevaluation Alignment (Signalized Full movement intersection at Midland Drive / Hinckley Drive)

We have presented the volumes for two additional scenarios for comparison purposes. These scenarios present volumes for comparison, but no operational analysis.

- 2007 Existing Conditions
- 2030 Prior EA Preferred Alternative (prior volumes from 2002 traffic study)

The traffic analysis states, the signalized intersection proposed with this reevaluation has the best effect on the overall system, serving more traffic at the study intersections, and reducing vehicle miles and hours traveled in the study area. The EA alternative (divided intersection) has more balanced operations at the study intersections, but at the expense of serving less traffic. Either alternative would be a reasonable one, but this study suggests that the signalized intersection as shown in reevaluation is the most direct and logical approach to mobility and access in the study area. For a detailed discussion of the analysis and results, please see the attached report in Appendix A.

Cultural Resources and Section 4(f)

In 2001, the Determinations of Eligibility and Findings of Effect were sent to the UTAH SHPO. The letter in Appendix C serves as an addendum to the 2001 findings and contains the Findings of Effect (for both Section 106 and Section 4(f)) for architectural properties affected by the project. The original Finding of Effect for these three properties was No Historic Properties Affected. The impacts were reevaluated for this document. Changes to the design plans have resulted in a finding of No Adverse Effect for each property (see enclosed maps in appendix C). These findings are provided in Table 2.

Table 2. Findings of Effect on Architectural Properties within the project APE.

Address	Date	Style	SHPO Rating	Finding of Effect	Section 4(f) Use
3713 Midland Drive West Haven	1930	Agricultural outbuildings only	Eligible: B	No Adverse Effect	de minimis
3575 Midland Drive West Haven	1935	Outbuilding only (modern residence adjacent)	Eligible: B	No Adverse Effect	de minimis
3594 Midland Drive West Haven	1950	WWII-era Cottage, general Post-WWII style	Eligible: B	No Adverse Effect	de minimis

Impacts to each historic property consist of minor strip takes and easements. This project will have de minimis impacts to these three properties.

Noise Analysis

The primary sources of noise in the project area are train traffic from the UPRR tracks, air traffic from the Ogden-Hinckley Municipal Airport and Hill Air Force Base, and automobile and truck traffic from 1900 West, Midland Drive, and the existing Hinckley Drive.

The EA noise analysis identified the impacted residents (EA Figure 3.5). The reevaluation will maintain these residences as impacted and add the following receptors along SR-108 due to the intersection improvements. These receptors are #3 (3595 S. Midland Dr.), #4 (3575 S. Midland Dr.), #5 (3500 S Midland Dr.), and #6 (3594 S. Midland Dr.). The reevaluation alignment will move the roadway about 150 feet closer to the south at the most extreme location. The closest residence not previously impacted is 420 feet from the roadway. This location is receptor #9. The EA identified this receptor as an increase of 9.3 dBA to 55.4 dBA. Due to the roadway moving closer it would increase over 10 dBA approaching 60 dBA. UDOT noise policy will be implemented based on these impacts to see if mitigation is both reasonable and feasible.

According to the “Highway Traffic Noise Analysis and Abatement Policy and Guidance” report produced by the Federal Highway Administration, for a sound wall to be effective, it must be high enough and long enough to block the view of the road. The “Highway Traffic Noise Analysis and Abatement Policy and Guidance” states that a good rule of thumb is that the noise barrier should extend four times as far in each direction as the distance from the receiver to the barrier. For instance, if the receiver is 50 feet from the proposed sound wall, the wall needs to extend at least 200 feet on either side of the receiver in order to avoid undesirable end effects. Openings in sound walls for driveway connections or intersecting streets destroy the effectiveness of barriers. Therefore, homes (receptors #3, #4, #5, #6) with direct access onto the highway do not qualify for sound walls. Due to the distance away from the roadway receptor #9 does not qualify. The EA identified building a wall 330 feet long 12 feet high heading north along SR-108 as a possible mitigation for receptor #8. This would cut off parcel # 28’s only access, which is SR-108 (length of parallel property line is 176 feet). Therefore a noise wall is not feasible.

Air Quality Analysis

Attainment Status of Study Area

The Clean Air Act Amendments (CAAA) of 1990 require that all areas which have recorded violations of the National Ambient Air Quality Standards (NAAQS) be designated as non-attainment areas and that these areas develop a State Implementation Plan (SIP) or Maintenance Plan that identifies control strategies

which must be implemented and allowable emissions levels which must be met for the area to be in conformance with the NAAQS.

The project is located in the portion of Weber County which is in attainment for carbon monoxide (CO), particulate matter 10 microns and smaller (PM-10) and the new 8-hour ozone standard. The City of Ogden is designated as attainment/maintenance for CO and nonattainment for PM-10, but this project is located outside of the Ogden city limits. Because of this, the Clean Air Act transportation conformity requirements do not apply to this project.

Regional Conformity

Proposed transportation projects must come from a Transportation Plan which demonstrates that the proposed project, when analyzed with other regional projects, conforms to the strategies and emission levels outlined in the Statewide Implementation Plan (SIP). The proposed project is currently listed on the 2007-2012 Regional Transportation Plan (RTP) developed by WFRC and UDOT's 2007-2012 Statewide Transportation Improvement Program (STIP). Both the STIP and WFRC's Regional Transportation Plan conform to the SIP.

Project Level Conformity

The pollutants that are studied at a project level and most directly attributable to motor vehicles are Carbon Monoxide (CO) & Particulate Matter (PM).

Carbon Monoxide (CO)

There have been no recent violations of the CO standard in the project study area. The project design modifications will provide an average level of service C in the design year 2030. Therefore, traffic volumes are not expected to create hot spot concentrations violating the National Ambient Air Quality Standards for CO. Therefore the project conforms to national air quality standards.

Particulate Matter (PM-10)

This project is located in Weber County, which is in attainment for PM-10. There have been no recent violations of the PM-10 standard in the project study area. Maximum PM-10 levels in Weber County have not exceeded 100 ug/m³ (daily concentration) in the last few years, which is substantially less than the NAAQS of 150 ug/m³ for PM-10. According to WFRC, PM-10 is primarily caused by fugitive dust along highways with small amounts of tailpipe soot, brake wear and tire wear. Secondary PM-10 emissions are caused by nitrogen oxides (NO_x) that may lead to the formation of nitrate particles. Fugitive dust is likely to increase as vehicle miles traveled (VMT) increases, but is not expected to exceed the PM-10 budget levels for mobile sources outlined in the SIP. NO_x emissions are a concern on the regional level, as opposed to the project level; WFRC's projections show that these emissions will remain below the budget estimates outlined in the SIP and are projected to be lower in future years.

Particulate Matter (PM-2.5)

Areas within Weber County may be designated as non-attainment areas under the new PM-2.5 standard (35 ug/m^3) that was established in 2006. The previous standard was 65 ug/m^3 and all areas along the Wasatch Front met this standard. New attainment designations will be made by the EPA in 2010. By 2013 the state of Utah will be required to submit a new section of the SIP that will describe how the state will meet the new standard. Once the SIP is approved, WFRC will make a conformity determination verifying that transportation emissions are within the limits described in the SIP. PM_{2.5} emissions from mobile sources have been decreasing during the last few years and this trend is likely to continue in the future.

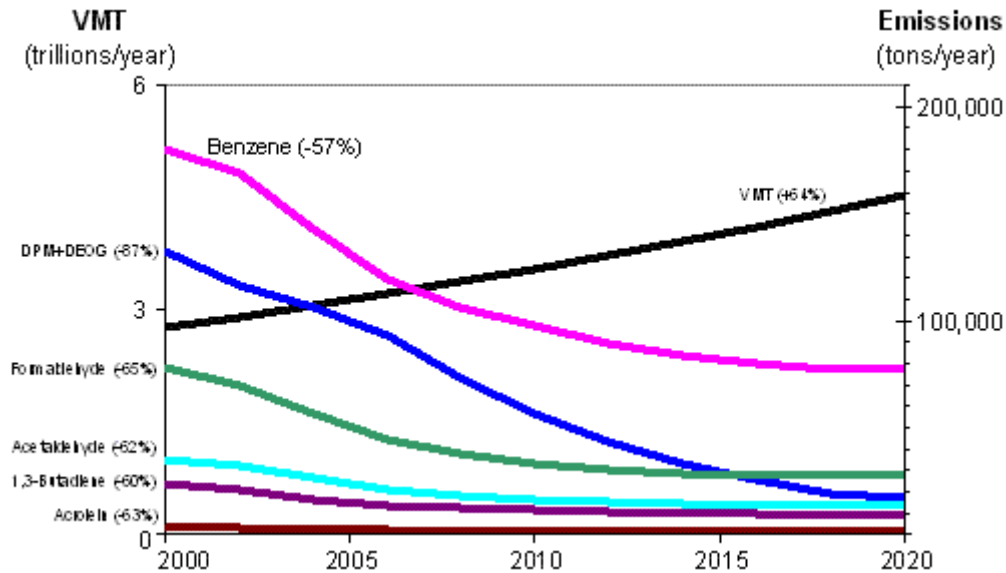
Mobile Source Air Toxics (MSAT's)

In addition to the criteria air pollutants for which there are National Ambient Air Quality Standards (NAAQS), EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The EPA is the lead Federal Agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of MSATs. The EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources. 66 FR 17229 (March 29, 2001). This rule was issued under the authority in Section 202 of the Clean Air Act. In its rule, EPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, FHWA projects that even with a 64 percent increase in VMT, these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 percent to 65 percent, and will reduce on-highway diesel PM emissions by 87 percent, as shown in the following graph:

U.S. Annual Vehicle Miles Traveled (VMT) vs. Mobile Source Air Toxics Emissions, 2000-2020



Notes: For on-road mobile sources. Emissions factors were generated using MOBILE6.2. MTBE proportion of market for oxygenates is held constant, at 50%. Gasoline RVP and oxygenate content are held constant. VMT: Highway Statistics 2000, Table VM-2 for 2000, analysis assumes annual growth rate of 2.5%. "DPM + DEOG" is based on MOBILE6.2-generated factors for elemental carbon, organic carbon and SO₄ from diesel-powered vehicles, with the particle size cutoff set at 10.0 microns.

As a result, EPA concluded that no further motor vehicle emissions standards or fuel standards were necessary to further control MSATs. The agency is preparing another rule under authority of CAA Section 202(l) that will address these issues and could make adjustments to the full 21 and the primary six MSATs.

Unavailable Information for Project Specific MSAT Impact Analysis

This [EA or EIS] includes a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools do not enable us to predict the project-specific health impacts of the emission changes associated with the alternatives in this [EA or EIS]. Due to these limitations, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information:

Information that is Unavailable or Incomplete

Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

- **Emissions:** The EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. While MOBILE 6.2 is used to predict emissions at a regional level, it has limited applicability at the project level. MOBILE 6.2 is a trip-based model--emission factors are projected based on a typical trip of 7.5 miles, and on average speeds for this typical trip. This means that MOBILE 6.2 does not have the ability to predict emission factors for a specific vehicle operating condition at a specific location at a specific time. Because of this limitation, MOBILE 6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale projects, and cannot adequately capture emissions effects of smaller projects. For particulate matter, the model results are not sensitive to average trip speed, although the other MSAT emission rates do change with changes in trip speed. Also, the emissions rates used in MOBILE 6.2 for both particulate matter and MSATs are based on a limited number of tests of mostly older-technology vehicles. Lastly, in its discussions of PM under the conformity rule, EPA has identified problems with MOBILE6.2 as an obstacle to quantitative analysis.

These deficiencies compromise the capability of MOBILE 6.2 to estimate MSAT emissions. MOBILE6.2 is an adequate tool for projecting emissions trends, and performing relative analyses between alternatives for very large projects, but it is not sensitive enough to capture the effects of travel changes tied to smaller projects or to predict emissions near specific roadside locations.

- **Dispersion.** The tools to predict how MSATs disperse are also limited. The EPA's current regulatory models, CALINE3 and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of carbon monoxide to determine compliance with the NAAQS. The performance of dispersion models is more accurate for predicting maximum concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. The NCHRP is

conducting research on best practices in applying models and other technical methods in the analysis of MSATs. This work also will focus on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Along with these general limitations of dispersion models, FHWA is also faced with a lack of monitoring data in most areas for use in establishing project-specific MSAT background concentrations.

- **Exposure Levels and Health Effects.** Finally, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways, and to determine the portion of a year that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various MSATs, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs

Research into the health impacts of MSATs is ongoing. For different emission types, there are a variety of studies that show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of EPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or State level.

The EPA is in the process of assessing the risks of various kinds of exposures to these pollutants. The EPA Integrated Risk Information System (IRIS) is a database

of human health effects that may result from exposure to various substances found in the environment. The IRIS database is located at <http://www.epa.gov/iris>. The following toxicity information for the six prioritized MSATs was taken from the IRIS database *Weight of Evidence Characterization* summaries. This information is taken verbatim from EPA's IRIS database and represents the Agency's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures.

- **Benzene** is characterized as a known human carcinogen.
- The potential carcinogenicity of **acrolein** cannot be determined because the existing data are inadequate for an assessment of human carcinogenic potential for either the oral or inhalation route of exposure.
- **Formaldehyde** is a probable human carcinogen, based on limited evidence in humans, and sufficient evidence in animals.
- **1,3-butadiene** is characterized as carcinogenic to humans by inhalation.
- **Acetaldehyde** is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.
- **Diesel exhaust** (DE) is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust as reviewed in this document is the combination of diesel particulate matter and diesel exhaust organic gases.
- **Diesel exhaust** also represents chronic respiratory effects, possibly the primary noncancer hazard from MSATs. Prolonged exposures may impair pulmonary function and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

There have been other studies that address MSAT health impacts in proximity to roadways. The Health Effects Institute, a non-profit organization funded by EPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway MSAT hot spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes -- particularly respiratory problems¹. Much of this research is not specific to MSATs, instead surveying the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, they do not provide information that would be useful to alleviate the uncertainties listed above and enable us to perform a more comprehensive evaluation of the health impacts specific to this project.

Relevance of Unavailable or Incomplete Information to Evaluating Reasonably Foreseeable Significant Adverse Impacts on the Environment, and Evaluation of impacts based upon theoretical approaches or research methods generally accepted in the scientific community

Because of the uncertainties outlined above, a quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. While available tools do allow us to reasonably predict relative emissions changes between alternatives for larger projects, the amount of MSAT emissions from each of the project alternatives and MSAT concentrations or exposures created by each of the project alternatives cannot be predicted with enough accuracy to be useful in estimating health impacts. (As noted above, the current emissions model is not capable of serving as a meaningful emissions analysis tool for smaller projects.) Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether any of the alternatives would have "significant adverse impacts on the human environment."

In this document, FHWA has provided a qualitative analysis of MSAT emissions relative to the Reevaluation Alternative. The concentrations and duration of exposures are uncertain, and because of this uncertainty, the health effects from these emissions cannot be estimated.¹

MSAT Analysis

For the proposed project, the amount of MSATs emitted would be proportional to the vehicle miles traveled, or VMT. The VMT on the proposed project would likely be slightly higher than the existing condition because the additional traffic lane in each direction increases the efficiency of the roadway and may attract rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to EPA's MOBILE6 emissions model, emissions of all of the priority MSATs except for diesel particulate matter decrease as speed increases. The extent to which these speed-related emissions decreases will offset VMT-related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.

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¹ South Coast Air Quality Management District, *Multiple Air Toxic Exposure Study-II (2000)*; Highway Health Hazards, *The Sierra Club (2004)* summarizing 24 Studies on the relationship between health and air quality); NEPA's *Uncertainty in the Federal Legal Scheme Controlling Air Pollution from Motor Vehicles*, *Environmental Law Institute*, 35 ELR 10273 (2005) with health studies cited therein.

Future emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

Conclusions

The proposed Hinckley Drive Extension project would likely result in a minimal increase in air pollutant emissions. The increase is expected to be below NAAQS. Therefore, no harmful health effects are expected as a result of this project. UDOT's standard specification for dust control and watering will apply to the construction phase of the project. No additional mitigation is necessary.

PROJECT IMPACTS AND MITIGATION

The following table is from the original FONSI and summarizes the environmental resources that would be impacted by implementation of the EA Preferred Alternative, compared to the impacts associated with the Reevaluation Alternative.

Table 3 Project Impacts And Mitigation

Impacts (EA Preferred Alternative)	Mitigation (EA Preferred Alternative)	Reevaluation
LAND USE		
The Selected Alternative is consistent with the planned land uses in the project area. The realignment of Midland Drive will isolate some parcels between 3600 South and the proposed Midland Drive access road (Browns Lane). However, traffic will be maintained on the abandoned portion of Midland Drive. The Selected Alternative would not affect open spaces, parks, or recreation facilities.	No mitigation is required.	The reevaluation alternative is consistent with the current land use plans. The redesign of the Midland Drive 3600 South intersection will not affect land use. With the proposed modifications, traffic will be maintained on the entire length of the current Midland Drive.

FARMLANDS

<p>The Selected Alternative will require 4 acres of right-of way from prime farmland between the railroad tracks. In addition, the Selected Alternative will require roughly 9 acres of other farmland/pasture between the UPRR tracks and Midland Drive.</p>	<p>The proposed extension will split the Hansen farming operations. However, access is being provided under the structures to most of the Hansen parcels. There is one parcel located just north of the proposed Hinckley Drive extension and east of the railroad tracks for which no access is currently being provided. UDOT has agreed to purchase this isolated parcel (2.2 acres) if the Preferred Alternative is approved. Other agricultural land is available in the area if the Cedar Crest Farms chooses to purchase additional farmland. UDOT has also agreed to help Cedar Crest Farms/Hansen Family and other farmers to locate suitable replacement farmland. Any effects of the Selected Alternative to water delivery or irrigation systems associated with these agricultural areas will be mitigated. These facilities will be relocated and reconstructed to maintain the continuity and use of the existing systems. UDOT will ensure that the remainder of the farmland stays viable and farmable by maintaining access, drainage and irrigation. Coordination with Ken Hansen (see comments in Appendix A) shall occur during final design regarding the following issues: field drains, water for livestock, irrigation, and loss of farming activities. Also, if the Preferred Alternative changes the land use of any property such that it loses animal rights UDOT has agreed to compensate and mitigate for these damages. If this is the case, UDOT will help these property owners to locate suitable replacement property and to compensate these individuals.</p>	<p>Access will be provided via the county road under the structure to the Hansen parcel north of Hinckley Dr and east of the tracks. Purchase of this parcel not necessary.</p>
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SOCIAL CONDITIONS

<p>The Selected Alternative will not divide any existing or planned neighborhoods or isolate any ethnic groups.</p>	<p>No mitigation is required.</p>	<p>No Change</p>
<p>The Selected Alternative will not directly impact any schools in the area. However, students from Valley View Elementary, Sand Ridge Junior High, and Roy High schools will have to cross the Selected Alternative either by bus or on foot.</p>	<p>During final design, the Superintendent of Weber School District will be contacted, and coordination will occur with the principals of the affected schools.</p>	<p>Pedestrian crossing will be provided at the signalized intersection.</p>

RELOCATIONS

<p>The Selected Alternative requires the relocation of three residences.</p>	<p>The loss of residences due to the Selected Alternative will be mitigated in accordance with federal, state, and local relocation policies. The acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources will be available to each relocated residence and business without discrimination. Comparable housing and building lots are currently available within the city of West Haven. UDOT will evaluate the need to provide early right-of-way acquisition for those property owners that demonstrate a hardship due to this project.</p>	<p>New alignment reduces the relocations to one residence at the intersection of 3600 S. and SR-108. An additional parcel was purchased under a hardship case.</p>
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ECONOMIC CONDITIONS

The Selected Alternative will not require the relocation of any businesses or affect existing commercial driveway access. The Selected Alternative will improve the regional traffic circulation and will make the area more inviting for businesses.	No mitigation is required.	No Change
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PEDESTRIANS, EQUESTRIANS, AND BICYCLISTS

The Selected Alternative will not impact any existing or planned pedestrian, equestrian, or bike trails. The Selected Alternative will cross over the proposed trail along the old Denver and Rio Grand Western railroad tracks and cross the proposed trails along 1900 West and Midland Drive.	A 6' sidewalk will be constructed along the south side of the Hinckley Drive extension as part of the Selected Alternative.	Pedestrian crossing will be provided at the signalized intersection.
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AIR QUALITY

The Hinckley Drive extension project is included in and is consistent with the WFRC Long Range Transportation Plan which has been determined to conform to appropriate regional air quality thresholds. Therefore, the Selected Alternative meets the regional air quality conformity requirements. CAL3QHC was used to determine the localized concentration of Carbon Monoxide for the 4000 South and Midland Drive intersection because it is projected to function at a level of service D. The analysis concludes that the Selected Alternative would not exceed the one hour carbon monoxide standard of 35 ppm nor exceed the eight hour carbon monoxide standard of 9 ppm. The Selected Alternative meets the Clean Air Act requirements of not creating new violations of the NAAQS or worsening the severity or frequency of existing violations since the build alternative results in lower concentrations of CO compared to the no-build.	No mitigation is required.	No Change No new violations of the NAAQS or worsening the severity or frequency of existing violations
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NOISE

The predicted noise levels on average increased 2.9 dBA for all receptors. Six residences received in excess of 65 dBA resulting from the Selected Alternative. A predicted 17 dBA noise increase was identified for one receiver located at 3450 South Midland Drive (Brown residence). Therefore, the proposed project impacts seven residents.	Minimum requirements outlined in UDOT's Noise Abatement Policy cannot be met at most sensitive receivers. Specifically, a minimum 5 dBA noise reduction cannot be achieved at these receptor locations due to adjacent at-grade intersections and sight distance requirements. The exception to the above statement is at the Country Meadows Mobile Home Park, where two mobile homes can be mitigated by a wall 330 feet long and 12 feet high. This wall would extend along the east side of Midland Drive, beginning at the north end of the existing 6-foot block wall. This wall would cost approximately \$42,000 and would result in a decrease of 5 dBA at the two impacted mobile homes.	Additional receivers were identified as impacted. Due to the direct access to SR-108 (gaps necessary in wall) a wall would not be effective. The wall previously identified to be built near the mobile home park would cut off another parcels access to SR-108, therefore it cannot be constructed.
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WATER QUALITY		
Effects to surface and ground waters from the Selected Alternative will be minimal during construction. The areas most likely to be impacted include the irrigation ditches and wetlands located within area.	Since the project will disturb more than 5 ac of surface area during construction, the UPDES General Storm Water Discharge Permit issued to UDOT will apply. As part of the requirements of this permit, a Storm Water Pollution Prevention Plan (SWPPP) will be developed and incorporated into the final design plans. A Notice of Intent form shall be submitted to the Utah Division of Water Quality prior to construction of the project. Short-term impacts on water quality will be minimized through implementation of UDOT's BMPs found in the Temporary Erosion and Sediment Control Manual. UDOT will continue to coordinate with the Utah Department of Environmental Quality, Division of Water Quality. UDOT will meet the DWQ requirements for detention basins for discharges over 5 cfs. This will ensure that the proposed project will not adversely impact water quality resources.	No Change
WETLANDS		
The Selected Alternative will impact approximately 0.80 acres of jurisdictional wetlands.	An Individual Section 404 permit will be obtained, and all requirements of the permit will be met. Unavoidable impacts to jurisdictional wetlands will be mitigated through close coordination with the USACOE. Proposed mitigation includes the purchase of 0.8 acres of wetland credits at a wetland mitigation bank located at either 1700 North 7200 West in Salt Lake County or at 40th West 2700 South in Davis County. These wetland mitigation banks are approved by the USACOE and service the Hinckley Drive extension project area because of their close proximity to the Great Salt Lake.	<p>Impacts are less than half of the original EA (approximately 0.37 acres)</p> <p>Re-evaluation of wetlands indicates that the remaining wetland area is isolated wetlands UDOT expects to be NON--jurisdictional</p> <p>USACE concurrence pending</p>
WILDLIFE		
The Utah Division of Wildlife Resources stated in a letter that the wildlife has been lost in the area due to development.	No mitigation is required.	No Change
FLOODPLAINS		
No floodplains exist within the project area.	No mitigation is required.	No Change
THREATENED OR ENDANGERED SPECIES		
The Selected Alternative will not impact any federally listed threatened or endangered species.	No Mitigation is required.	No Change
CULTURAL RESOURCES AND SECTION 4(f)		
The Selected Alternative will not impact any cultural resources identified within the project study area. The State Historic Preservation Office has agreed to UDOT's Determination of Eligibility/Finding of Effect document. No Section 4(f) Evaluation is required for the Hinckley Drive extension project.	No mitigation is required.	No Adverse Effect And De Minimis
HAZARDOUS WASTE		
The Selected Alternative will not impact any hazardous waste sites.	No mitigation is required.	No Change

<i>VISUAL CONDITIONS</i>		
The Selected Alternative will be constructed in an area that is currently farmland or is undeveloped. The 40' fill heights for the two railroad bridges will partially block the northern views from the Northcrest and Halvern subdivisions.	During the design phase of the project, a special committee will be organized to consider architectural treatments at the railroad bridges. Landscaping will be implemented along the Selected Alternative, especially on the fill slopes near the Northcrest and Halvern Subdivision.	No Change
<i>INVASIVE SPECIES</i>		
The Selected Alternative could result in the introduction and spread of invasive weed species.	Active measures to revegetate disturbed areas with native grasses and shrubs will be taken to expedite revegetation and to minimize invasion of non-native species to these disturbed sites. The Contractor will be required to comply with the UDOT Special Provision 01575S "Invasive Weed Control". Regular inspection and cleaning of construction equipment will be required.	No Change
<i>CONSTRUCTION IMPACTS</i>		
Residents in the area and people using Midland Drive, 3600 South, and 1900 West will experience minor, temporary inconveniences due to general construction noise, dust, and travel delays. Construction will impact some of the irrigation features in the area.	Emergency vehicle access will be maintained throughout the construction phase. The contractor will be required to prepare a detailed traffic control and detour plan. Mitigation measures during construction will include the use of dust retardant and adequate traffic control with advance notice to those affected. The contractor will be required to abide by the UDOT specification for noise and vibration control. All water rights will be protected or purchased. Any changes to irrigation systems (permanent or temporary) will be coordinated with the affected property owner and irrigation company. Conduit for traffic signal interconnect will be installed from 1900 West to Midland Drive. Street lighting will be coordinated with UDOT and installed at appropriate locations. Coordination with Ken Hansen (see comments in Appendix A) shall occur during final design regarding the following issues: field drains, water for livestock, irrigation, loss of farming activities. During the design phase, the project team will conduct public meetings. These meetings will provide the opportunity for the cities and public to provide input into the details of the design and construction issues.	No Change
<i>INDIRECT AND CUMULATIVE IMPACTS</i>		
The resources for which cumulative impacts have been analyzed include Land use, Farmlands, Social Conditions, Economic Conditions, Noise, Water Quality, and Visual Conditions.	No mitigation is required.	No Change
<i>CONTEXT SENSITIVE DESIGN</i>		
The Selected Alternative was directed using input from residents and land owners in the area, interested resource agencies, and the cities of Roy and West Haven.	During the design phase of the project, a special committee will be organized to consider architectural treatments at the railroad bridges. Landscaping will be implemented along the Selected Alternative, especially on the fill slopes near the Northcrest and Halvern subdivision. During the design phase, the project team will conduct public meetings. These meetings will provide the opportunity for the cities and public to provide input into the details of the design and construction issues. UDOT will continue to work with UTA regarding the location of potential park and ride lots.	No Change

Concluding Statement

This project is located in an area of Weber County that is experiencing rapid growth. As pointed out in this Reevaluation and the original EA, this growth is expected to continue with or without the proposed action. As stated in the original EA, this project is needed to accommodate existing and future travel demands within the project area. The FHWA has determined that there has been proper consideration of avoidance alternatives to environmentally sensitive areas. Proper mitigation where avoidance is not practical has been provided for impacts resulting from the Reevaluation's Alternative.

Based upon the findings of this Reevaluation and as with the EA, the FHWA has determined that this project will have no significant impact on the human environment for the following reasons:

- As with the EA, the Reevaluation Alternative has effects to humans and the environment that are both beneficial and adverse. The adverse effects on the quality of the human environment are not likely to be highly controversial, nor do they present a degree of high uncertainty or unique and unknown risks. On balance, FHWA believes the long term effects will be beneficial to the general public.
- The Reevaluation Alternative will have some minor adverse effects on wetlands. These impacts are actually less than the EA alternative. As a whole, the adverse effects are not significant and will be properly mitigated.
- A FONSI determination of this Reevaluation as with the original EA will not establish a precedent for future actions with significant effects.
- The Reevaluation Alternative and reasonable anticipated actions that stem from or are in conjunction with the Reevaluation Alternative create no significant impact on the environment.
- The Reevaluation Alternative will not cause loss or destruction of significant scientific, cultural, or historical resources.
- The Reevaluation Alternative will not adversely affect threatened and endangered species.
- Action on the Reevaluation Alternative will cause no violations of Federal, State, or local laws, or requirements imposed for the protection of the environment.
- The Reevaluation Alternative will minimize impacts while improving safety and overall network efficiency for the community.